ARIN Technologies Inc.

Location Awareness for the Internet of Things

www.arintechnologies.xyz   **vivek@arintechnologies.xyz**

Big organizations have hugely inefficient processes due to lack of knowledge

- Workers need to find tools, equipment and product in large facilities
  - 30% of Aerospace manufacturing worker time is spent searching!
  - 10% overage in number of tools and equipment available in a plant
- Managers need to know utilization of high value movable assets
  - Some assets are estimated to have only 50% utilization e.g forklifts
- Process improvement managers need to know how work actually gets done
- Safety managers need to implement processes and technologies for a safe environment while ensuring productivity
  - Each accident involving a worker can cost industry on average $40,000
- P&L Owners need to ensure that operating costs are optimal while ensuring a safe working environment

Business processes need to know **where** something **is or has been** to derive value

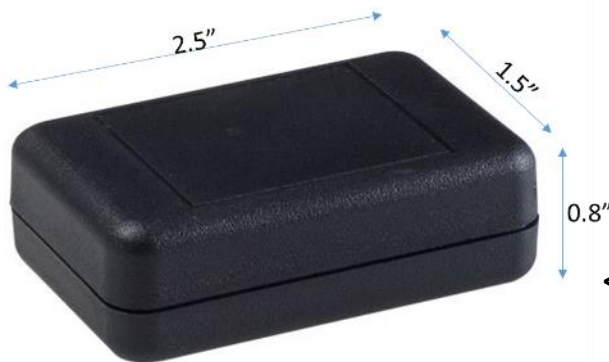|	Number of Facilities	Target Use cases
Distribution centers	500 – 1 Million Sq ft 4,500 – 250k – 1 M Sq ft 40,000 – up to 250k Sq ft	Asset and equipment location Utilization rates for forklifts Safety – forklift accidents
Manufacturing	346,000 manufacturers	

- Initial target market includes Distribution and Manufacturing due to common requirements
- Later stage markets include Retail, Healthcare, Underground Mining, DoD and Public Safety

Solution comprises of low cost hardware paired with a cloud based analytics engine
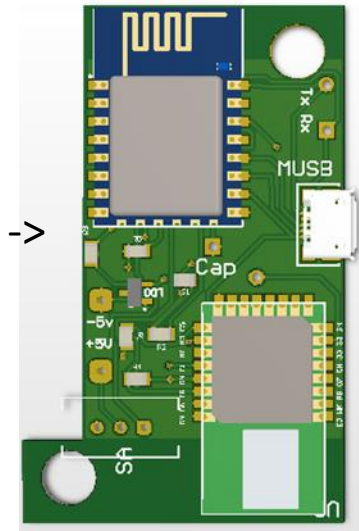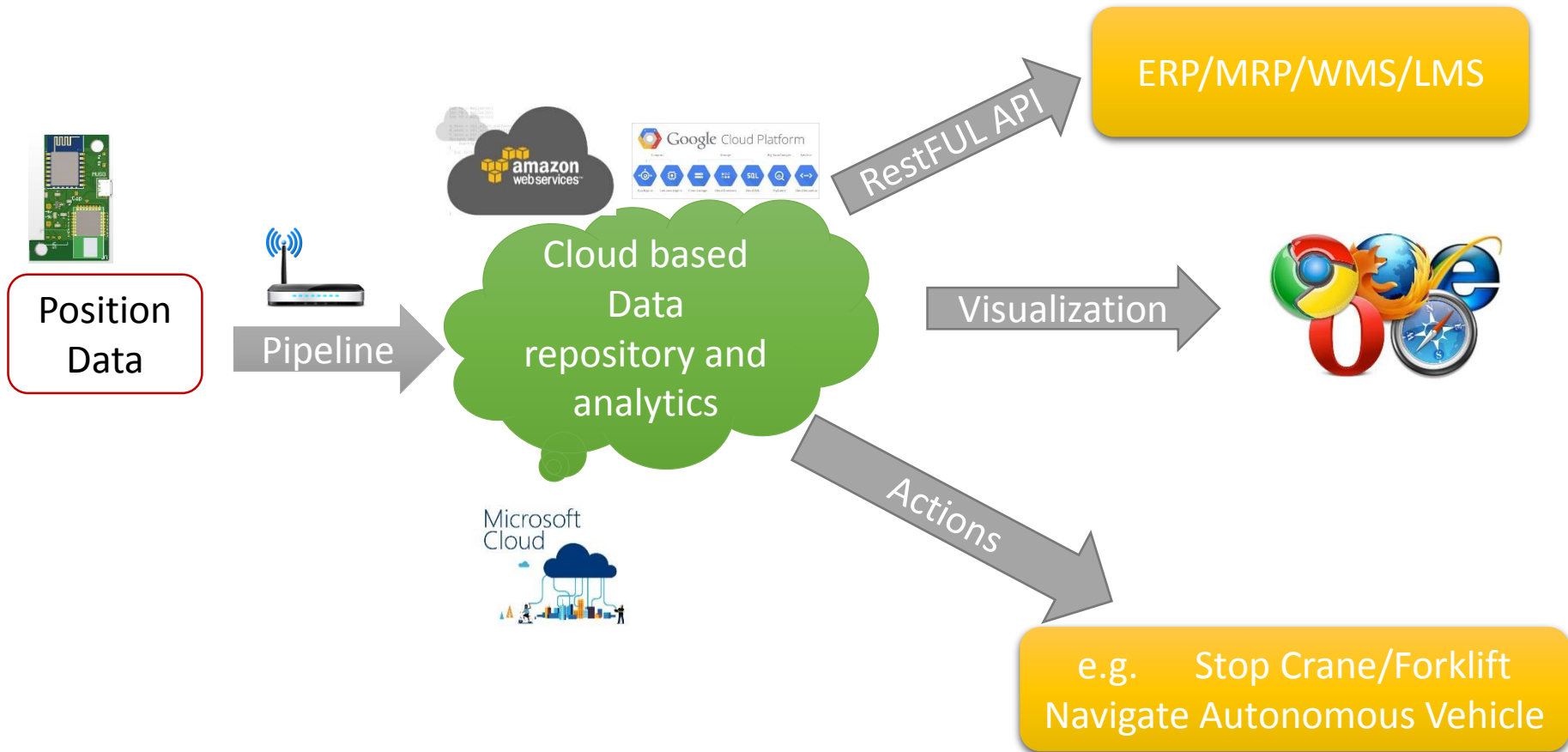

<- Visualization (if required)

Actual Electronics ->

<- Packaging 2.5"x1.5"x0.8"

Easy deployment and integration with enterprise systems through cloud

ERP/MRP/WMS/LMS

RestFUL API

Position Data

Pipeline

Cloud based Data repository and analytics

Visualization

Actions

e.g.   Stop Crane/Forklift
Navigate Autonomous Vehicle

"Location as a Service" to enable many time saving and safety enhancing applications*

- Finding people, assets and other equipment

- Tracing a path for entities of interest

- Geo-fencing for one of more tracked entities
  - Warn appropriate authorities if a person is somewhere they should not be
  - Take action such as stop a gantry crane or stop a forklift if a person enters a prohibited area
  - Warn a construction worker when they get too close to a dangerous area

*In order of priority

Recurring revenue model with flexibility to support customers capital allocation goals

- Monthly fee based on type of service rendered
  - Find tagged entity
  - Insights/Reports based on historic data
  - Automated Actions through integration with business processes e.g. stop gantry crane or forklift if danger detected

- Hardware, Anchors and Tags can be distributed via
  - Lease hardware with usage commitment
  - Outright Purchase of hardware

- One time installation cost
  - Outsourced installation network
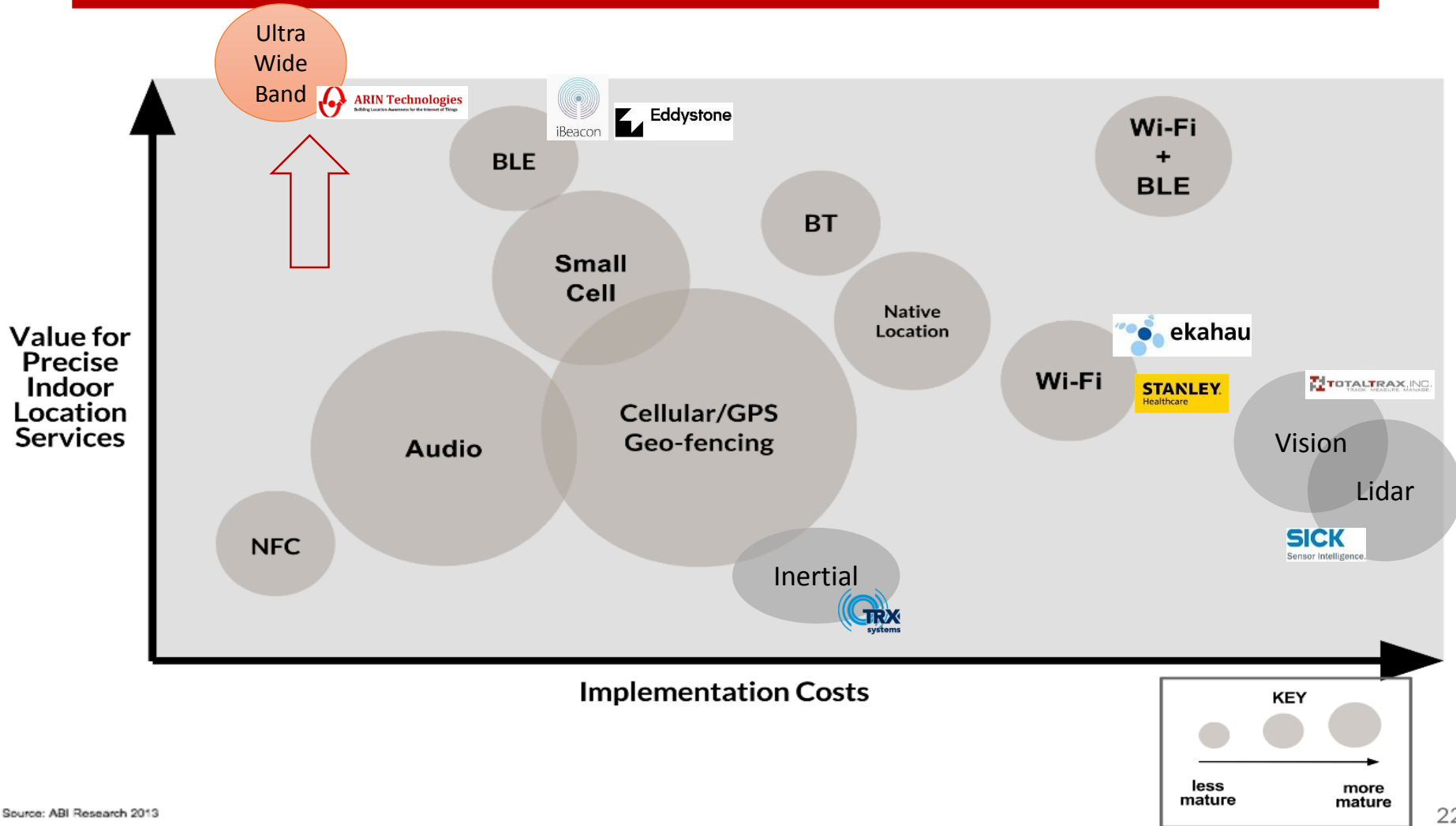 - In-house installation team for specific type of customers

Finding traction in distribution centers and manufacturing plants

- Deployed at a e-commerce Fulfilment center
    - Daily pick path for order fillers
    - Time for each pick path
    - Distance travelled for each pick path
    - Inventory placement based on real time demand

- Fortune 200 company, pilot project
    - Forklift Safety
    - Spaghetti diagrams for lean operations
    - Utilization of forklifts
    - Many other use cases

We provide the highest value positioning in the indoor positioning ecosystem

Source: ABI Research 2013

Extremely qualified team making this complex technology easily deployable

- **Aaron Acton, Technology:**
  - 12 yrs. of experience in complex scientific product development
  - ANSYS, Astrobotic
  - U of Ottawa – BS Eng., CMU – MS Eng. Robotics Institute

- **Perry Servedio, Product:**
  - 11 yrs. of experience in fail safe product development
  - ANSYS, CalISO
  - U Pitt - BS Eng.

- **Mark Imgrund, Operations:**
  - Retd. VP Product engineering from high growth technology company
  - ANSYS
  - Cornell – BS Eng., MS Eng., CMU MBA

- **Vivek Kulkarni, CEO:**
  - 16 yrs. of experience in Product development, Marketing and Strategy
  - ANSYS, PTC, ESI Group
  - U Bombay - BS Eng., U Cincinnati – MS Eng., CMU – M.B.A

Mentored by an extremely successful group of entrepreneurs and executives

- Francois Estellon
  - CIO, Gardner Denver
  - VP Product Management, Caterpillar
  - CIO, VP Technology, Bucyrus
  - VP Business Development and Delivery, Sycor
  - Founder/CEO, Business Connection

- Joe Fairbanks
  - Business advisor, Iagnosis
  - Retd. EVP Sales & Support, ANSYS

- Stephan Mueller
  - COO ThrillMill
  - COO, Just between Friends
  - CEO, Lily & Strum
  - Board Member, Coro Pittsburgh & RustBuilt

Supported by local organizations

- AlphaLabGear by InnovationWorks

- Startbot.io

- ThrillMill